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CONSTRUCTION ELEMENT FOR RETAINER WALL TO BE DECORATED  
WITH VEGETATION

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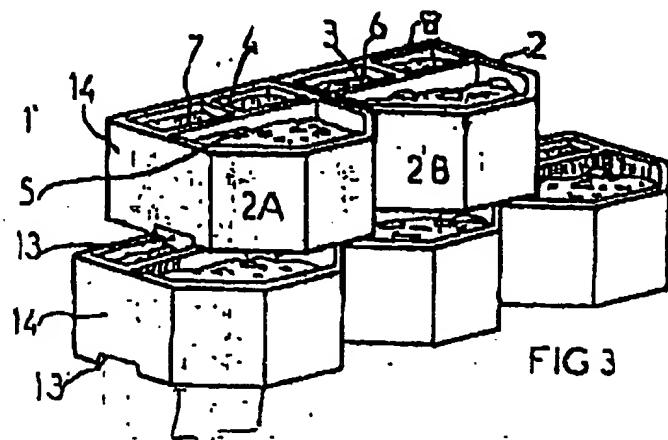
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The invention relates to construction elements.

The assembly of the construction elements (1) consists of a bottomless container (2), vertical partitions (3,4) which delimit, downstream, a large space (5) and upstream two smaller spaces (6,7), thanks to a partition (3) parallel to the upstream wall (8) of the container and thanks to the perpendicular partition (4) separating said upstream wall (8) and the partition (3) which is parallel to it. Recesses (13), on the lateral walls (14) of the container (2) allow the interlocking of the containers (2) one into the other.

The invention applies to retainer walls [and] noise-control walls.



The invention relates to construction elements for retainer walls intended to be decorated with vegetation.

The creation of increasingly large ditches for the creation or the broadening of roads requires the creation of retainer walls. These walls are expensive and unpleasant to look at. The preservation of the environment requires the decoration of the retainer walls with vegetation.

These retainer walls can be used by private individuals, by professionals (bridge and road construction department, rural development, landscape architects, enterprises doing public works, cultivators, etc.).

Construction elements already exist. These elements function as containers; they are caissons which leave a large open space so that bushes or plants can grow and cover them. These elements are assembled in the dry state by interlocking, one into the other.

Other elements have a shape in the form of a cavity which will prevent the excessively rapid evacuation of the water. The filling of the elements or the containers with dirt occurs gradually as the construction elements are assembled. Because of their caisson shape, these elements produce a chain in the assembly of the retainer wall.

The above-described construction elements are made of [sic; incorporated with] flower pots, which are mounted in the dry state and assembled one into the other to form a retainer wall. This type of retainer wall is more or less fragile, depending on the slope of the hillside or the ditch, the climate, etc. The plants have a decorative function to hide the wall, but they do

not work in cooperation in any manner with the construction elements and the soil to improve the stability of said wall.

The invention solves these problems. The plants have an effect on the retainer wall which is anchored by the roots of the plants in the soil, where the roots of the plants also criss-cross from one construction element to the other, thus improving the assembly of said elements to each other.

For this purpose, the construction element according to the invention consists of a bottomless container, where vertical partitions delimit one large space and at least two [smaller] spaces.

The vertical partitions are arranged so that they delimit a large space downstream and at least two smaller spaces upstream.

A construction element can consist of two or several bottomless containers.

According to a preferred embodiment, each construction element consists of a container whose vertical partitions delimit, downstream, one larger space and upstream two smaller spaces, thanks to a partition parallel to the upstream wall of the container and thanks to the perpendicular partition connecting said upstream wall and the partition which is parallel to the latter.

According to another preferred embodiment, the construction element consists of two adjacent containers, made of a single block, which reduces the costs of manufacturing. At the work sites it is possible to separate the two containers by means of a hammer.

The enclosed drawings, which are given as nonlimiting indicative examples, facilitate the understanding of the

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invention. They represent a preferred embodiment according to the invention.

Figure 1 is a top view of a construction element consisting of two containers.

Figure 2 is a cross section of the construction element along the axis A-A shown in Figure 1.

Figure 3 is a perspective view of an assembly of construction elements.

Figure 4 is a cross section of an assembly of construction elements showing the slope of the hillside, the dirt in the containers, the plants and their roots.

The construction element 1 according to the invention consists of a bottomless container 2, vertical partitions 3,4 which delimit a large space 5 and at least two spaces 6 and 7.

The vertical partitions 3 and 4 are arranged so that they delimit a large space 5 upstream and at least two smaller spaces 6 and 7 downstream.

A construction element 1 can consist of two containers 2A and 2B or several bottomless containers.

The vertical partitions 3 and 4 delimit, downstream, a large space 5 and upstream two smaller spaces 6,7, thanks to a partition 3 which is parallel to the upstream wall 8 of the container and thanks to the perpendicular partition 4 connecting said upstream wall 8 and the partition 3 which is parallel to it.

According to another preferred embodiment represented in Figure 3, the construction element 1 consists of two adjacent containers 2A and 2B, manufactured of a single block, which reduces the costs of manufacturing.

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The roots 9 of a plant 11 can pass from one container to the other through the large space 5; however, they can only go directly into the soil 10 through spaces 6 and 7. Thanks to these upstream spaces 6 and 7, the roots 9 intertwine from one plant 11 to the other, but only in the soil 10.

The size of the spaces 6 and 7 is such that when one of the containers 2 is placed on top of the other, the roots 9 which exit from the top container can only go in the direction of the soil 10 and not into the lower container, that is, the vertical partition 3 of the upper container is at the level of the upstream wall 8 of the lower container.

In Figure 4, the first container rests on a foundation 12, then the block is buried in the ground leading a few centimeters above ground, approximately 8 cm.

If the height of the wall is small, approximately 1 m 50 [cm], the foundation 12 is made of sifted earth. If the height of the wall is greater than 1 m 50, the foundation is poured. Recesses 13 arranged on the lateral walls 14 of the container 2 allow the containers 2 to interlock one into the other when they are placed on top of each other, to assemble the retainer wall in the dry condition.

#### Claims

1. Construction element (1) to assemble retainer walls in the dry condition, intended to be decorated with vegetation, consisting of a bottomless container (2), characterized by the fact that the vertical partitions (3 and 4) are arranged so that they delimit a large space (5) downstream which functions as a

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flower pot and at least two smaller spaces (6 and 7) upstream which function as openings for roots.

2. Construction element for the assembly in the dry condition of retainer walls intended to be decorated with vegetation according to Claim 1, characterized by the fact that a construction element (1) can consist of two containers (2A,2B) or several bottomless containers.

3. Construction element for the assembly in the dry condition of retainer walls intended to be decorated with vegetation according to Claim 1, characterized by the fact that the vertical partitions (3,4) delimit downstream a large space (5) and upstream two smaller spaces (6 and 7), thanks to a partition (3) which is parallel to the upstream wall (8) of the container and to the perpendicular partition (4) connecting said upstream wall (8) and the partition (3) which is parallel to it.

4. Construction element for the assembly in the dry condition of retainer walls intended to be decorated with vegetation according to any one of Claims 1, 2 or 3, characterized by the fact that the construction element (1) consists of two adjacent containers (2A,2B) manufactured of a single block, which reduces the costs of manufacturing.

5. Construction element for the assembly in the dry state of retainer walls intended to be decorated with vegetation according to any one of Claims 1, 2, 3, 4 or 5, characterized by the fact that the size of the spaces (6 and 7) is such when the containers (2) are placed one on top of the other, the roots (9), which exit the top container, can only go in the direction of the soil (10) and not into the lower container; that is, the vertical

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partition (3) of the top container is at the level of the upstream wall (8) of the lower container.

6. Construction element for the assembly in the dry state of retainer walls intended to be decorated with vegetation according to any one of Claims 1, 2, 3, 4 or 5, characterized by the fact that it comprises recesses (13) in the lateral walls (14) of the container (2), so as to allow the containers to interlock into the other when placed on top of each other for the assembly in the dry condition of the retainer wall.

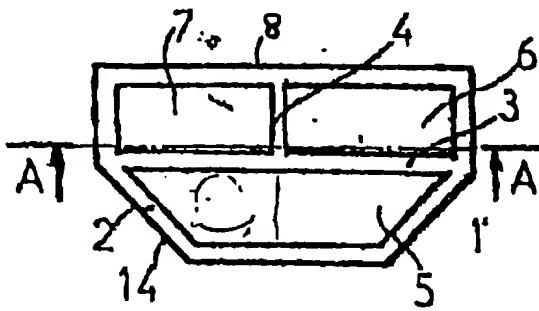


Figure 1

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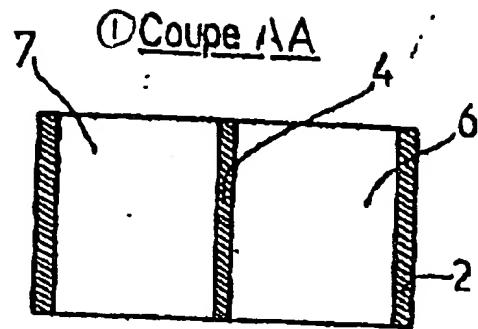


Figure 2

Key: 1 Cross section

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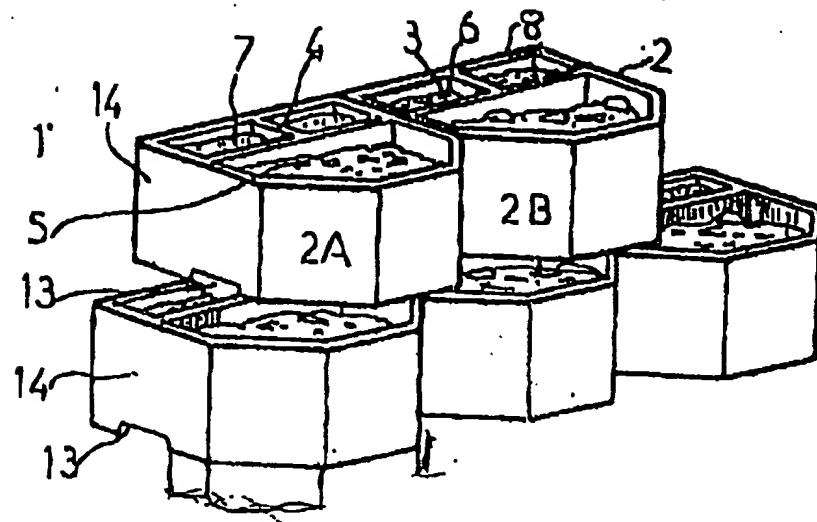


Figure 3

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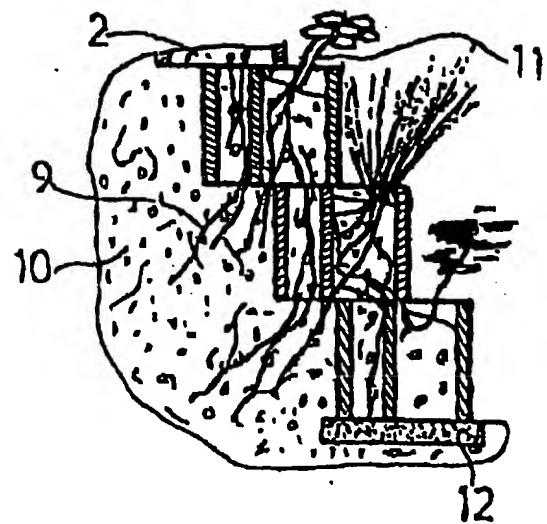


Figure 4

European Patent  
Office

Application Number  
EP 85 43 0030

### EUROPEAN SEARCH REPORT

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int C5)
A	DE-U-7 824 776 (MARMOR & KUNSTSTEINWERKE GEHR. HEINZMANN) * Pages 1-4	1	E 01 E 8/00 E 02 D 29/02 E 04 C 1/39
A	DE-A-3 247 030 (REIBGES) * Claims *	1,6	
A	CH-A- 612 238 (ZEMENTWAREN AG OTTO KALBERMATTEN) * Page 2, Figures *	1	
A	EP-A-0 102 637 (AG HUNZIKER & CIE) Claim 1 *	1	
A	DE-U-7 738 774 (LANDMANN) Claims 1, 2, 5, 6; Figure 1 *	1	
<hr/> <p>The present search report has been drawn up for all claims.</p> <hr/>			
Place of search	Date of completion of the search	Examiner	
Berlin	April 17, 1986	PAETZEL H-J	
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